

Clean Water

starts with you

The DNR tests waters throughout Iowa to make sure they are meeting state water quality standards. Those standards are in place to protect drinking water, aquatic life and recreational uses, like swimming. When a stream or lake doesn't meet those standards, the stream or lake is placed on the state's impaired waters list. The DNR then creates a plan which outlines ways Iowans can help improve the water quality in their community's lakes and streams.

DNR needs your input

Every Iowan needs the help of their fellow citizens and watershed groups to improve water quality in their community. If you or your group would like to meet with a DNR staff member to discuss water quality, please contact Chris Van Gorp at (515) 281-4791.



For more information on water quality improvements plans (TMDLs), please visit www.iowadnr.com/water/tmdlwqa/.

Beeds Lake

Pollutant: *Bacteria*

Pollution Sources: *Human and animal waste material*

What's wrong with Beeds Lake?

Pollution from human and animal waste, also known as fecal matter, keeps the lake from meeting its state-designated standards. Untreated waste from these sources can carry disease-causing microorganisms, called pathogens, into the water. These pathogens can make people sick.

Testing for *E. coli* bacteria levels can indicate if there may be fecal matter and pathogens present in the water. However, pathogens, not *E. coli*, are what can cause illness. Due to high *E. coli* levels, a number of swimming advisories have been posted at the state park beach since 2000 to protect swimmers from pathogens and disease.

What is causing the problem?

Most pollution in the Beeds Lake watershed (the area of land that drains into the lake) comes from nonpoint sources, or sources that are not easily



Beeds Lake has provided visitors with a variety of recreational opportunities since 1934.



traced back to a specific "point," like a wastewater treatment or industrial plant. In the Beeds Lake watershed, nonpoint sources include areas used to land-apply manure, and improperly connected or failing septic systems. Rainwater and snowmelt can wash waste from livestock, pets and wildlife, including geese, into streams and lakes.

To reduce the amount of fecal matter reaching the lake, changes in waste and land management will be needed. It will take time to make these changes and to see the effects.

What can be done to improve Beeds Lake?

The ultimate goal is to improve water quality and remove the lake from the state's impaired waters list. To do that, sources of human and animal waste need to be cleaned up in the watershed. Using research results and with the help of the public, the DNR has developed a water quality improvement plan (also known as a TMDL, or total maximum daily load) to reduce the amount of pollutants reaching Beeds Lake.

A water quality improvement plan is a suggestion to local communities on how they can improve their area's water quality. While the DNR has done the background research and can provide some technical and funding assistance, it is ultimately up to the watershed residents to take action and clean up Beeds Lake.

The DNR has suggested the following conservation practices for the Beeds Lake watershed:

- ◆ Decrease the population of geese near the beach at Beeds Lake State Park, and/or remove fecal matter from the beach area.
- ◆ Limit cattle access to streams and explore other water sources for cattle.
- ◆ Improve manure application activities and reduce soil erosion.
- ◆ Find and replace improperly connected or failing septic systems. The Franklin County Sanitarian estimates that at least 60 percent of the farmsteads in the county have unpermitted septic systems with improper hookups.
- ◆ Investigate the benefits of relocating the beach in a new space along the lake.

Past success leads to future success

While this may seem like a large effort, the residents of the Beeds Lake watershed have done



High bacteria levels in Beeds Lake have been reported since 2000 and are typically seen in July and August.

it before. From 1994 to 1998, watershed residents participated in a DNR-sponsored project to reduce sediment and nutrients reaching Beeds Lake. This involvement shows the residents in the Beeds Lake watershed are committed to improving their lake's water quality. That same effort will be needed to address the current problems at Beeds Lake.

